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which I happened recently to witness at the auction mart. In the estimated values, allowance has been made for future bonuses, in accordance with the method above proposed.

Date of Policy.	Name of Office.	Present Age.	Sums assured and Bonuses already declared.	Premium.	Estimated Value.	Sold for
Sept., 1822	A	83	2,920	£100 0 0	£1,893	£1,960
„ „	B	83	2,812	92 8 7	1,828	2,000
July, 1834	C	68	2,326	82 13 4	734	960

On the Medical Estimate of Life for Life Assurance. By STEPHEN H. WARD, M.D.*

(Continued from page 263.)

HAVING thus glanced at different occupations as elements in the medical estimate of life, it may not be out of place to introduce the following table by M. Lombard, exhibiting trades in relation to consumption. In 1,000 deaths in each of the different occupations noticed, the following proportions were furnished by this disease :—

With vegetable and mineral emanations . . .	176
With various dusts	145
With sedentary life	140
With workshop life	138
With hot and dry air	127
With stooping posture	122
With sudden movements of arms	116
With muscular exercise and active life	89
With exercise of the voice	75
Living in the open air	73
With animal emanations	60
With watery vapour	53

It may be further observed, that the better the condition of life, the less the liability to consumption. Marc d'Espine has proved that tuberculosis occasions 68 deaths per 1,000 among the rich, and 233 per 1,000 among the poor.

Residence.—There are but few points in regard to residence in this country which materially affect the value of life. Town life, though far healthier than it was a few years back, still falls far

* See Letter from Thomas Fraser, Esq., page 357.

short of country. "Taking," says Dr. Letheby, "the mortality of 15 in 1,000 as that which is natural to this country, and comparing it with that of 30 in 1,000 as that which occurs in some parts of the city of London, you will perceive that the death rate is exactly doubled; and if, in pursuing the inquiry still further, we ask what has been the mean duration of adult life among those who have passed away from us, we shall find that every man who dies in this city has been robbed of from 10 to 12 years of his existence." It must be remembered, however, that this excessive mortality falls mainly upon the lowest classes, and does not materially affect those who are likely to present themselves for life assurance.

There are some country districts, as those of a marshy and malarious character, which exhibit peculiar risks. "Taking the range of 10 years," says the Registrar-General, "the average mortality of the population in England does not exceed 17 in 1,000. The marshes in low ill-drained districts raise the mortality above this. Thus, in Ely, Whittlesey, Wisbeach, and North Witchford, four thinly-peopled marshy districts in Cambridgeshire, round the Wash, the mortality was at the rate of 23, 25, 25, and 27 in 1,000. The districts on the lower portion of the Thames suffer much from marsh diseases. All our dockyards, except Pembroke, are on unhealthy sites." The author has been informed, upon very credible authority, that in the marshy districts of Essex, near to London—viz., about Barking, Purfleet, Grays, &c.—severe agues are common, affecting the entire population, and exhibiting their consequences in severe abdominal disorders, especially enlarged spleen, in general impairment of the constitution and health, and considerably diminished longevity.

It is usually made a condition with the party proposing, that change of residence to any foreign country should not be made without acquainting the Office with the circumstance. Some of our colonial possessions—as Canada, the Cape, and New Zealand,—are quite as healthy as the mother country. Statistics are yet wanting to determine the sanitary position of Australia; but some portions of this vast country would appear, at certain seasons, to be ravaged by dysentery and fevers. Residence in the East or West Indies is a serious matter, and involves a considerable addition to a life in other respects of first-class character. An individual who purposes to make a prolonged sojourn in tropical countries should be of unexceptionable habits, and exhibit a perfectly sound state of health, and especially of the abdominal viscera;

otherwise, his life should be declined. The mortality amongst officers and civilians in India, owing to the destructive effects of fevers, dysentery, liver affections, and cholera, would appear to be nearly three times as great as among the same classes at home. In reference to habits, Colonel Sykes remarks, that where one teetotaller is cut off in India, four intemperate men lose their lives. The relative unhealthiness of other foreign stations was noticed when speaking of the occupation of the soldier.

Family History.—In consequence of the absolute influence of inheritance as a predisposing cause of certain diseases, family history occupies a prominent position in the medical estimate of life. It should be fully elicited by questions as to the age and health of parents, if living, or their ages at, and causes of, their death; also, as to the ages at and causes of death of any brothers or sisters who may have died, and the ages and health of survivors. Special inquiries should, moreover, be made, as to the existence of consumption or insanity in either the direct or collateral branches. Parties proposing for life assurance are aware that an unfavourable family history tells against a life, and, consequently, at times cover the existence of consumption by describing it under some other name. Thus, a brother or a father is said to have died of asthma or bronchitis, when, on inquiry, the disease is found to have been undoubtedly phthisis; and the very convenient expression, “died at” or “soon after childbirth,” is constantly used, not necessarily designedly, where the death has been from some constitutional malady—dying “in childbirth” meaning, very often, some weeks; and “soon after,” many months subsequently to that event. It is obvious, therefore, that not a little tact and patience, and sacrifice of time, on the part of the medical referee, are occasionally necessary in order to arrive at the truth.

The Registrar-General's Office now presents a ready means of verifying the cause of death, but which has not hitherto been systematically turned to account in inquiries connected with life assurance. In doubtful cases, one of two things may be done—either to require the party proposing to bring certified copies of the Registrar's returns, or to apply to the chief office on the part of the Company.

It is not so much any special disease that is transmitted as an inheritance, as a special type of constitution with the liabilities which it involves. The line of this hereditary transmission is not always direct from parent to offspring, but is, at times, very capricious—now passing over one generation and showing itself

in the next, now limiting itself either to the males or to the females of a family.

Sometimes inheritance does not show itself in any morbid form, but in a general debility of constitution, with diminished duration of life. Finlaison has shown statistically that there is, in certain families, a characteristic longevity, while in others there is an habitual falling short of the allotted average duration of life. "To be born of healthy and strong parents," says Lévy, "is to have a good chance of longevity; the energy of the constitution is the best buckler against the assault of destructive causes. Rush did not know an octogenarian whose family did not offer many examples of advanced old age. This observation, made also by Sinclair, has acquired the force of an axiom, so common is it to meet with longevity as a frequent occurrence among many members of the same family. Inheritance exercises the same influence on the total duration of life of short period: in the Turgot family, scarcely a member passed the fiftieth year; he who rendered it illustrious died at the age of 53, in spite of the appearance of great vigour of temperament."

The prominent position which consumption occupies in the mortality tables of this country is due far more to its undoubted and constant hereditary transmission, than to any peculiarities of climate. It is evident, consequently, that the marked existence of this disease, in any family, gravely affects the value of life of the survivors. To non-professional men it seems a hard matter to decline a life, otherwise of first-class character, simply because strumous disease has carried off certain relatives of the present or past generation. It is, nevertheless, a sound principle of action in life assurance; and the medical advisers of Offices now make it a pretty general rule to recommend the rejection of a life when so many as two immediate relatives have died of consumption. "But, nevertheless," observes Dr. Christison, "there are personal circumstances which so far outweigh this objection as to allow of a moderate risk being accepted. These are—1. The proposer's own general health, and freedom from colds in particular. 2. A robust frame. 3. A well-formed chest; not flat, or narrow, or high-shouldered. 4. Absence of the scrofulous character of the countenance. 5. A deep respiration. 6. Resemblance to the healthy side of his house, when consumption has come into the family by one side only. 7. A sound state of lungs, established by a careful stethoscopic examination. 8. His age being beyond the period when consumption is most apt to be developed in those constitu-

tionally predisposed to it." To such qualifying conditions may be added—the being beyond the age, by some years, at which consumption has generally shown itself in his family; absence of the scrofulous taint in his surviving immediate relatives; following an occupation not likely to act as exciting cause; and being of temperate habits.

It must be borne in mind that the existence of the strumous diathesis is shown not only by pulmonary phthisis, but also by diseased joints, curvature of the spine, certain eruptions, as lepra and psoriasis, glandular swellings, &c. The physician just quoted notices the frequent association of consumption and cancer in families, not in individuals, and considers that one death from each of these, in a proposer's family, places his life upon the same footing as two deaths from consumption. Insanity is, also, not unfrequently associated with either of the blood diseases in question.

Heart diseases are frequently hereditary, but their connection with acute rheumatism may explain this. Cancer is another malady hereditarily transmitted, and to which somewhat similar rules may be applied as in consumption. The age at which it is likely to develop itself, the symptoms which would indicate implication of any special organ, and the characteristic aspect, will not be lost sight of.

Articular rheumatism, again, is, in many instances, an inheritance. Of 165 cases of acute arthro-rheumatism, collected by Chomel, Patouillet, and Piorry, 81 were proved hereditary. Inheritance, again, is not only the most frequent predisposing cause of gout, but is, in many cases, the exciting cause also, where the habits of individuals, as regards exercise and temperance, are unexceptionable. Sir C. Scudamore found, that of 522 patients, 322 could trace the disease to either parent or grandparent, uncle or aunt.

The liability to certain abdominal affections, and especially to diseases of the liver, would appear to be hereditarily transmitted. M. Lévy gives the following illustration:—Louis Pierre Desmorètes died, in 1804, of abscess of the liver; of six children whom he left, one perished in the Moscow retreat, and the five others died, like their father, of abscess of the liver, between the ages of 48 and 55. The eldest of the five children, who died at Tours in 1830, left a son, now (1850) 48 years old, and of pronounced bilious temperament. This last is himself father of two sons, the elder of whom presents all the marks of hepatic predominance,

whilst the younger, who furnished these details, is of sanguine-lymphatic temperament.

Calculi and worms would also appear to be hereditary. Many cerebral affections, as apoplexy, epilepsy, and insanity, are distinctly hereditary. Cerebral hæmorrhage occurs, in certain families, generation after generation. Apoplexy, as a general rule, shows a preference for those descended from apoplectic parents, especially where the conformation is the same—or, rather, it is this, with its liabilities, which is inherited. Individuals descended from apoplectic parents, and of apoplectic aspect, should be closely questioned as to their liability to headache, vertigo, epistaxis, &c. Epilepsy has been shown, by a considerable accumulation of facts, to be hereditary.

Insanity, or the special type of constitution which involves it, is not only inherited, but shows itself in the same form in the members of the same family. The attack frequently, too, occurs at the same time of life in the offspring as in the parent. M. Foville regards hereditary transmission as the most frequent cause of insanity. M. Esquirol, in 431 insane persons, noticed hereditary transmission 337 times; and M. Desportes, in 3,458, 342 times; whilst it was noticed 105 times in 789 insane persons at the Salpêtrière.

The various risks attending this malady must be obvious to any medical man. When an individual descended from an insane parent or parents, or with one or two of his immediate relatives so affected, is described as having had an attack of “nervous depression,” “nervous debility,” “hypochondriasis,” “cerebral congestion,” or as being liable to frequent headaches, &c., it will be advisable to decline the life.

In some cases it may be desirable to extend family history inquiries to the children of the party proposing, inasmuch as, at times, especially in such blood diseases as struma and syphilis, the condition of the offspring reflects light upon the constitution of the parent.

The medical referee will be alive to the importance of viewing a faulty family history in connection with other circumstances—as, for instance, occupation. Thus, a stone-mason or baker, who has lost one immediate relative from consumption, is much in the same position as a man who has lost two relatives from such cause, but is pursuing a healthy occupation.

Previous illnesses or accidents.—Inquiry is next to be made into the antecedents of the party proposing, as regards illness and

accident. It is advisable and usual to note down the ailments from which the proposer has suffered, the date of their occurrence, their duration, and the name of the medical attendant at the time, for further information, if requisite. The medical referee must take care that the diseases of the party are correctly described, as, of course, with the unscrupulous, there will be no hesitation in deceiving, if they think they can escape detection; and even those possessed of general honesty of purpose, lay the flattering unction to their souls that there is no harm in qualifying or stating but a portion of the truth.

Special inquiry is to be made as to whether the party has had certain diseases which affect more immediately the value of life. These diseases are:—

1. *Rheumatism*.—Where the party states that he has suffered from this, it should be distinctly specified whether it was of the chronic, muscular, or acute arthritic character. If the latter, it will be necessary to elicit information as to its severity and duration, and whether the heart was affected or no. In all cases where there has, at some previous period, been an attack of acute rheumatism, it will be necessary to institute an unusually careful examination of the heart, in order to determine whether there is any permanent lesion of this viscus. If there be anything abnormal as regards sounds, rhythm, or impulse, or even occasional functional derangement in the way of palpitations, the life should be unhesitatingly declined. Medical men are now thoroughly aware of the intimate connection between acute rheumatism and diseases of the heart. Bouillaud considers that heart disease occurs in a large majority of cases of acute rheumatism. Dr. William Budd found, that of 43 cases of acute rheumatism, 21 had heart affection, and five of these pericarditis. Dr. Begbie, in his analysis of emerged risks of the Scottish Widows' Fund, found that of 53 deaths of diseases of the heart and large vessels, there were 13 persons who had suffered from acute rheumatism before acceptance. Dr. Christison, in his analysis of the Standard risks, does not find the proportion quite so great. The liability to the complication, it should be remembered, is greater in young people than in those of more advanced age. When the proposer exhibits the rheumatic diathesis, and has already had one or two attacks, it will be better to decline the life.

2. *Gout*.—The having suffered from an occasional attack of this disease, does not materially affect the value of any life, although the dangers of retrocedent gout, and the fact that the disease goes

on increasing in force and frequency of manifestation, and so ultimately affects the constitution, would seem to indicate some additional risk. Mr. Hannam states, that, out of 152,000 persons assured at the Equitable during a period of 21 years, at every age from 10 upwards, only 21 died of gout, and those principally of advanced ages; and he concludes, therefore, that it is very problematical whether it tends to shorten life. It must be remembered, however, that deaths from retrocedent or suppressed gout would be represented under different titles; and that, consequently, the statistics in question do not fairly represent the risk. When an individual is a great victim to gout, and has had severe attacks in the stomach, or suspicious head or chest symptoms, it will be better to decline the risk. In a gouty person who is a free liver and of sedentary habits, the risk is, of course, increased.

3. *Rupture*.—When this exists, it is necessary to ascertain, by special examination, its nature, and whether an effective truss is worn, the continuance in the use of which should be made a condition of acceptance. It will be well also to consider how far the risk of strangulation is increased by occupation. It is usual to make an addition to the premium in all cases, whether of long or of recent standing. The author of *Memoranda for Effecting Life Assurance* shows, that the danger from hernia is, perhaps, over-estimated, from the fact that, of 799 cases of rupture which were admitted into the hospitals of the British army during a period of about 20 years, 10 died, being only one death in every 79·9 cases.

4. *Erysipelas* is a disease of diminished vitality, and its occurrence should be regarded with suspicion, especially in those whose occupation exposes them to intemperate habits. “Erysipelas,” says Dr. Begbie, “has proved fatal in eight instances, in the experience of the Society (Scottish Widows’ Fund), and has been associated with several internal affections which have been the cause of death, more particularly with disease of the brain and its membranes, and disorders of the liver and bowels. Considering the frequency of this association, the disposition of the disease to recur from time to time, and its origin in depraved digestion and defective assimilation, I apprehend that those who have been affected by it cannot be considered as eligible subjects of life assurance.”

5. *Spitting of blood*.—The experience of all physicians shows, that pulmonary consumption is the termination of a very large majority of cases in which there has once been hæmoptysis to any extent. Dr. Walshe considers that there is no material exception to this rule, even in the case of females, where it would appear to

have been vicarious. In some cases, where there has been slight spitting of blood, it will probably be easy to determine the source of the hæmorrhage, and to show that it did not come from the lungs; but if any doubt exist, the Society should have the benefit of it. Where there has been undoubted hæmoptysis to any extent, especially in an individual exhibiting a strumous tendency, either in himself or family, the life must be unconditionally rejected.

6. *Chest affections—asthma.*—Repeated attacks of bronchitis in old people, similar attacks, or even frequent catarrhs or colds, in individuals exhibiting any strumous tendency—also, in individuals with such tendency, an attack of pneumonia or pleurisy, especially if such attack have left behind any lesion whatever—would render the life ineligible. There would obviously be increased risk, in case of any fresh acute attack, to a lung or lungs already damaged. Asthma, when of purely spasmodic character, occurring only at distant intervals, and evidently dependent solely on an exciting cause, such as peculiar locality, severe indigestion, &c., does not materially affect the value of a life. It is necessary, however, to be certain that there is no predisposing cause of such functional derangement in the shape of organic lesion of the heart or lungs.

Mr. Christie's analysis of the Registrar-General's Reports for seven years, ending with 1854, gives a total of 354,536 deaths from consumption, or a proportion of 12,355 in every 100,000. According to the *Report of the Registrar-General for 1856*, 25 in 100 deaths are caused by consumption and by diseases of the respiratory organs; consumption causing one-half of these, or one-eighth of the whole, and nearly one-half of all the deaths between the ages 15 and 35. Again, from Dr. Begbie's careful analysis of the mortality which occurred among the persons assured in the Scottish Widows' Fund from 1815 to 1845, it appears that 24·7 per cent. of the whole mortality was due to diseases of the respiratory organs. Moreover, consumption is now known not to be, as was formerly supposed, peculiarly a disease of the earlier periods of life. Although the absolute mortality is greatest between 20 and 40, the relative mortality is greatest between 40 and 50, and the liability continues even beyond 60. The consideration of such facts will show how important it is that the medical referee should acquaint himself with the tendency of the party under examination to such disease, in the way of inheritance, antecedent ailments, and present health.

7. *Dropsy and renal affections.*—As a general rule, an attack of dropsy renders a life ineligible. At all events, the occurrence

of such, even some years previously, involves the necessity of very careful examination of the heart, and also, through the urine, of the kidneys. After recent scarlatina, it will be desirable to test the urine. Dropsy, it may be observed, occupies a prominent place, as a cause of death, in the Registrar-General's reports.

Tendency to attacks of gravel is bad, in those whose ancestors have been victims to calculus. An attack of diabetes would, of course, disqualify for assurance.

8. *Diseases of the liver* have already been shown to be entailed as an inheritance, and (at least, cirrhosis of the organ) to be induced by intemperance. We must look suspiciously upon parties reported to have been occasionally bilious, or to have had an attack or attacks of jaundice, especially if they are free livers, about the middle period of life, and exposed by occupation to over-indulgence in spirituous liquors.

9. *Stomach and other abdominal affections.*—Dr. Christison considers that “in the case of proposals of assurance about the commencement of old age, a liability to stomach complaints should be viewed with distrust.” He also dwells upon the frequent connexion of latent tubercle with indigestion, and considers that a liability to this should be viewed with distrust in those who exhibit any strumous tendency. Frequent diarrhoea or vomiting may, it should be remembered, depend upon some organic lesion. The presence of tape worm, with its possible train of severe nervous symptoms, is against a life. Such a life should, indeed, not be entertained, until we are satisfied by medical certificate that the worm has been removed.

10. *Fits.*—It is not always easy to determine the nature of a fit or fits, from which an individual is said to have suffered at some previous, and perhaps distant, period. When there is any doubt, it is best not to incur the hazard of recommending the life. An attack of syncope, dependent on some evident exciting cause, as gastric derangement, exhausting discharges, or severe physical or mental exhaustion, offers no objection to a life that has subsequently been in all respects good. One attack, however slight, of unquestionable apoplectic character, or of paralysis, dependent upon whatever cause, renders a life quite ineligible. Attacks of giddiness, headache, epistaxis, or cerebral congestion, or habitual costiveness, or an irregular or intermittent pulse, are fatal objections, if occurring in subjects either personally or hereditarily predisposed to apoplexy. It should also be borne in mind, that apoplexy is peculiarly a disease of advanced life. “Of the 72 deaths,” says Dr. Begbie, “recorded

by the Scottish Widows' Fund, 20 took place before 50, and 52 after that age. Of the 63 recorded by Rochoux, 17 occurred before 50, and 46 after that period of life; and, in the experience of both, nearly twice as many instances of the disease showed themselves between the ages of 60 and 70, as between 70 and 80." Apoplexy also causes greater mortality in advanced life than any other disease.

One attack of mania, or even of hypochondriasis, or mental or nervous excitement or depression, where there is hereditary tendency to insanity, would disqualify for life assurance.

11. *Open ulcers*.—In reference to these, Dr. Brinton judiciously observes, that they "will generally oblige us to decline the life in which they are at present. The elements of the increase they add to the average risk are not very difficult to imagine. They imply a drain on the constitution, which, as age advances and nutrition declines, may become a dangerous or fatal one. Their closure sometimes brings about visceral disease, by revulsion of morbid action to internal organs. They indicate in the man either a bad constitution or hurtful habits of life—often both. Lastly, while they may at any time take on increased action, so as to threaten the limb or the life, they involve no inconsiderable risk of infection with erysipelas, if, indeed, they do not form a channel for the reception of the exanthematous disorders.

12. *Accidents* which occurred at some previous period may have left behind them results unfavourable to the value of life, in the way of permanent lesion of particular organs, or impaired state of constitution. The loss or shortening of a leg, or a stiff joint, may entail inability to take sufficient exercise, and consequent ill effects.

13. *Vaccination*.—"Have you had the small-pox, or been effectually vaccinated?" is a question to be found in the forms of examination adopted by all Offices. Mr. Milne observed, many years ago, that vaccination, if pushed to the extent of exterminating small-pox, would diminish the mortality from 1 in 40, to 1 in 43·5, or nearly 9 per cent. Its importance, as a safeguard against one of the most fatal scourges of humanity, is duly appreciated by medical men, and its performance is now insisted upon by legislative enactment. Some of the public, however, doubt its efficacy as a preventive of small-pox, while others call in question the necessity of insisting upon its performance, on the ground that the disease against which it is to act as a protection, is almost exterminated. These views may, however, be at once answered, by reference to statistical facts. In a letter addressed, some months

since, to the editor of the *Times*, Mr. Marson, surgeon to the Small-Pox and Vaccination Hospital, says, that the proportion of persons who take the small-pox after vaccination to the number vaccinated is very small indeed; and of those who do take it, and have four or more cicatrices, a fatal termination does not occur oftener than once in 200 attacks. Mr. Marson's statement is based upon a careful record of all cases admitted into the Hospital during a period of 20 years.

In the *Report of the Vaccine Board for 1856*, it is shown that small-pox is yet far from being annihilated, that the mortality is quite as great as ever among those attacked, and that even the more advanced periods of life do not enjoy immunity from it.

The vaccine scars should be looked for in all cases where there is the slightest doubt about their existence; and when they are imperfect, faint, or not to be detected, re-vaccination should be made a condition of acceptance. Some individuals seem to have been proof against the virus, after repeated vaccinations, in early life; but this affords no argument, as physiologists are aware, against re-performance of the operation in maturity.

Present health.—Having made himself acquainted with the antecedents of the party, in the shape of habits, previous ailments, family history, &c., the medical referee must proceed to a personal examination, in order to ascertain the existing state of health, and freedom from disease and deformity. If the examinee be not in present good health—if he be suffering from severe cold or bronchial affection, from headache, indigestion, diarrhoea, &c.—it will be better to defer the examination until he has recovered.

A careful examination must be made of the chest, and note taken of any deviations from the normal condition to be detected by the eye, in the way of malformation, as undue projection of either side, the condition called pigeon-breasted, &c. The state of the lungs and heart must next be examined into by palpation, percussion, and mediate or immediate auscultation. Medical men will do well to bear in mind the fact, that normally there is, in a large majority of cases, more marked vocal resonance and fremitus over the right than over the left apex. This is, however, frequently set down in medical reports as an abnormal symptom, or the unsatisfactory statement is made, that there is a difference in the two sides.

“Is the aid of the spirometer indispensable in examination for Life Assurance?” Considering the great variation in the results arrived at by different inquirers, as to standard vital capacity and

deviations therefrom; the difficulty that there is in getting individuals to use the instrument properly; the fact that the instrument itself can only give rough indications, and should never supersede the more careful examination and more reliable results obtainable by the other methods of examination, it may fairly be concluded that its aid is not indispensable, and that the condition of the lungs may, in nearly all cases, be perfectly well determined without it. There is one condition, however, namely, that of diffused tubercle, in which auscultation and percussion would fail perhaps to reveal anything definite, but where the spirometer would announce diminished vital capacity. Even here, however, by imperfect expansion of chest, by constitutional signs, such as hurried breathing and frequent pulse, and, possibly, also by family history, we should form a tolerably accurate idea of the existing state of things.

When any morbid condition of the heart exists, or is suspected, if the characteristic sounds are not at once evident, they may be rendered so by making the party walk quickly up and down the room. The aspect and pulse will generally aid in the diagnosis of such lesion.

It is, of course, quite unnecessary to dilate upon the characteristic physical signs of various pulmonary and cardiac affections, as every well-educated and experienced medical practitioner is presumed to possess a ready familiarity with them.

The circulation, and its index, the pulse, of an individual under examination is usually nervously excited. Allowing for this, any marked deviation from the healthy character, in the shape of undue frequency or slowness, irregularity, intermission, or deficiency, will not escape notice. Extreme frequency, in a party exhibiting hereditary or personal strumous tendency, is, of course, an objectionable symptom. An intermitting, or irregular pulse, if of recent standing, is against the acceptance of the life, especially in people advanced in years. Such a state of pulse may be habitual—a personal peculiarity. A report from the private medical attendant will usually decide this. Ossification of arteries, with the increased liability to cerebral hæmorrhage which it entails, will necessarily involve rejection of the life.

The state of the liver and spleen, the general softness, or otherwise, of the abdomen, may next be determined by palpation and percussion. No special examination of the kidneys through the urine is required, except in cases already indicated. When any one organ has exhibited greater susceptibility to disorder than the

others, or the party has suffered from an attack likely to involve damage of any organ, a more special and detailed report upon the present state of such will be desirable. Thus, special notice of the lungs is requisite in one who has had an attack of pneumonia, or repeated attacks of bronchitis; of the heart, in an individual who has suffered from acute rheumatism; of the liver, in any one who has been jaundiced, or frequently bilious.

Much that relates to present health has been noticed under previous heads. It remains, therefore, only to observe, that the greatest tact and delicacy should be exhibited in conducting the personal examination. The medical referee should proceed with his inquiries and investigation in a quiet, easy, and assuring manner, and thus endeavour to allay the fears and nervousness so frequently exhibited by the examinee at the commencement of the interview.

Peculiarities affecting the female.—It is necessary to make inquiries as to the regularity of the uterine functions. The hazards attending puberty and the cessation of the menses must be borne in mind, though there can be no doubt that these have been much overrated.

The danger attending childbirth would also appear to have been hitherto considered greater than it really is. The Registrar-General finds that, on an average of eight years, about 1 in every 189 accouchements were fatal. It appears also, from tables based upon Swedish returns, and cited by the same authority, that the danger of dying in childbirth is greater at the age 15 to 25, than it is at 25 to 35. "It is in this early age that a large number of children are borne by their mothers; and these first births are, for various reasons, attended with peculiar hazards." The first births that occur after 30 are, however, undoubtedly attended with relatively greater risk than those occurring at an earlier period. "It may be probably assumed," says Dr. Farr, "that the child-bearing women of a population are, in the language of the Insurance Offices, 'select lives,' at least 'select' in a certain sense; but it can only be determined by further researches, whether they are less or more liable to be attacked or to die by the diseases not incidental to childbirth. It is only well known that, when they are attacked by zymotic diseases, such as cholera and small-pox, they succumb in unusually high proportions."

An inquiry should be made of the party as to the number and favourable nature, or otherwise, of her confinements; and if she be now pregnant with her first child, or her previous confinements

have been attended with any peculiar risk, especially that of hæmorrhage, it will be better to defer the consideration of the proposal until the confinement is over. A young female who exhibits any marked contraction of pelvis, or other feature of development likely to involve undue risk from childbearing is, of course, a bad life.

Having furnished himself with all the materials necessary to form an estimate of the life before him, the medical referee will express his opinion of its eligibility for assurance, either in some general summary, or by placing it in one of a certain number of classes. These are generally three in number: the first consists of unexceptionable lives, or lives presenting so little that is objectionable that they may be assured at the usual rate; the second, of lives in which the objectionable circumstances are such as to involve more than ordinary risk, which is to be met by an addition to the premium; the third, of lives presenting objections of so serious a nature that it would be inexpedient to entertain them upon any terms.

The medical referee will save much trouble at the head office of the Society for which he may be acting, by giving due attention to all the questions in the printed form, by avoiding, as far as possible, qualified expressions, and by reporting positively upon the different points of the life before him.

In deciding in which class any given life shall be placed, all the circumstances which affect its value must be taken into consideration; and there must be borne in mind, what experience will confirm, that, as a rule, small additions are useless; and that extra risk is to be avoided by rejection, or met by a considerable addition to the premium. There will be no difficulty in at once coming to the conclusion that certain lives are eligible, and that others are quite ineligible; but there is a large number of intermediate lives that will tax the patience, demand mature consideration, and involve further inquiries before they can be finally disposed of. These, no especial rules can exactly meet; and, after all that has been advanced in the way of guidance, much must be left to the tact, judgment, and experience of the medical examiner.
